

CLAIMS

- 1) A package for holding a temperature sensitive optical device, said package including:
 - a) a substrate;
 - b) a first link connecting to said optical device at a first attachment point, and connecting to said substrate at a location remote from said first attachment point;
 - c) a second link connecting to said optical device at a second attachment point that is remote from said first attachment point, said second link connecting to said substrate at a location remote from said second attachment point;
 - d) said substrate, said first and said second links imposing a strain variation to said optical device in dependence of temperature.
- 2) A package as defined in claim 1, wherein said optical device includes an optical fiber.
- 3) A package as defined in claim 2, wherein said optical fiber includes a grating.
- 4) A package as defined in claim 3, wherein said grating is a Bragg grating.
- 5) A package as defined in claim 4, wherein said Bragg grating is characterized by a wavelength, said substrate, said first and said second links being characterized by respective coefficients of thermal expansion selected to reduce variations of said wavelength induced by temperature changes of said optical device.
- 6) A package as defined in claim 5, wherein said first and said second links are characterized by respective coefficients of thermal expansion selected to maintain said wavelength substantially constant over a determined temperature range of said optical device.
- 7) A package as defined in claim 5, wherein said first link extends along said optical fiber.
- 8) A package as defined in claim 7, wherein said second link extends along said optical fiber.
- 9) A package as defined in claim 8, wherein said first link has the same coefficient of thermal expansion as the second link.
- 10) A package as defined in claim 8, wherein said first link, said second link and said optical fiber are located in a common imaginary plane.

- 11) A package as defined in claim 1, wherein said substrate includes a window to allow exposition of said optical device to a source of optical energy electromagnetic radiation.
- 12) A package for holding a temperature sensitive optical device, comprising:
 - a) a substrate receiving said optical device;
 - b) a thermally compensating component mounted to said optical device and to said substrate;
 - c) said substrate having a window to allow said optical device to be exposed to optical energy electromagnetic radiation to change optical properties of the optical device.
- 13) A package as defined in claim 12, wherein said thermally compensating component imposing a strain variation to said optical device in dependence of temperature.
- 14) A package as defined in claim 13, including a shield to reduce exposure of said thermally compensating component to optical energy electromagnetic radiation directed at said optical device for causing a change of the optical properties of the optical device.
- 15) A package as defined in claim 14, wherein said shield reduces exposure of said thermally compensating component to optical energy electromagnetic radiation scattered by said optical component when said optical component is exposed to optical energy electromagnetic radiation for causing a change of the optical properties of the optical device.
- 16) A package as defined in claim 15, wherein said shield is mounted between said optical device and said thermally compensating component.
- 17) A package as defined in claim 16, wherein said shield is removable from said package.
- 18) A package as defined in claim 17, wherein said shield is removable through said window.
- 19) A method for manufacturing a packaged optical component, comprising:
 - a) placing an optical component in a substrate;
 - b) making a connection between a thermally compensating link and said optical component;
 - c) stabilizing said connection;

- d) exposing said optical component to optical energy electromagnetic radiation subsequent to said stabilizing to change an optical property of said optical component.
- 20) A method as defined in claim 19, wherein said optical component includes an optical fiber.
- 21) A method as defined in claim 20, wherein said exposing writes on said optical fiber a grating.
- 22) A method as defined in claim 21, wherein said grating is a Bragg grating.
- 23) A method as defined in claim 21, including affixing said thermally compensating link to said substrate.
- 24) A method as defined in claim 21, wherein said stabilizing includes annealing of said grating.
- 25) A method as defined in claim 23, including a protective coating from said fiber after performing said exposing.
- 26) A method as defined in claim 24, wherein said optical energy electromagnetic radiation is laser light.
- 27) A method as defined in claim 19, wherein said thermally compensating link is a first thermally compensating link and said connection is a first connection, said method including making a second connection between a second thermally compensating link and said optical component and stabilizing said second connection.
- 28) A package manufactured by the method defined in claim 19.
- 29) A method for manufacturing a packaged optical component, comprising:
 - a) providing:
 - i) an optical component mounted on a substrate;
 - ii) a thermally compensating component link connected to said optical component;
 - b) exposing said optical component to optical energy electromagnetic radiation to change an optical property of said optical component;
 - c) shielding said thermally compensating component from optical electromagnetic radiation scattered by said optical component during said exposing.
- 30) A method as defined in claim 29, wherein said shielding includes placing a shield between said optical component and said thermally compensating component.

- 31) A method as defined in claim 30, including removing said shield subsequent to said exposing.
- 32) A method for manufacturing a packaged optical component, comprising:
 - a) providing:
 - i) an optical component mounted on a substrate;
 - ii) a thermally compensating component link connected to said optical component;
 - b) exposing said optical component to optical energy electromagnetic radiation to change an optical property of said optical component;
 - c) said thermally compensating component being located relative said optical component such that optical electromagnetic radiation scattered by said optical component during said exposing is precluded from causing said thermally compensating component to induce a strain in said optical component.
- 33) A method as defined in claim 32, wherein said exposing writes a Bragg grating.
- 34) A package containing an optical component manufactured by the method of claim 33.